

Appendix C

Methodology for ARTEP Mission Collective Training

“Tactical maneuver wins battles and engagements. By keeping the enemy off balance, it also protects the force. In both the offense and the defense, it positions forces to close with and destroy the enemy.”
FM 3-0, Operations, June 2001.

C-1. Introduction. Unit training for modern warfare requires large maneuver/training areas to conduct exercises over varying terrain. A training environment that restricts employment of a unit (company team, battalion task force, or brigade combat team) does not properly reflect battlefield conditions and fails to prepare units for combat. Experience shows a direct correlation between realistic training and success on the battlefield.

C-2. Battalion task force isolated-event exercises. It is possible to train for each of the unit ARTEP missions in Appendix A in isolation. Figures C-1 through C-3 depict three ARTEP 71-2 missions for the mechanized infantry/armor battalion task force (offense, defense, and retrograde). The figures illustrate the common control measures and maneuver area required for a field training exercise (FTX) executing each of the three ARTEP missions as an isolated event.

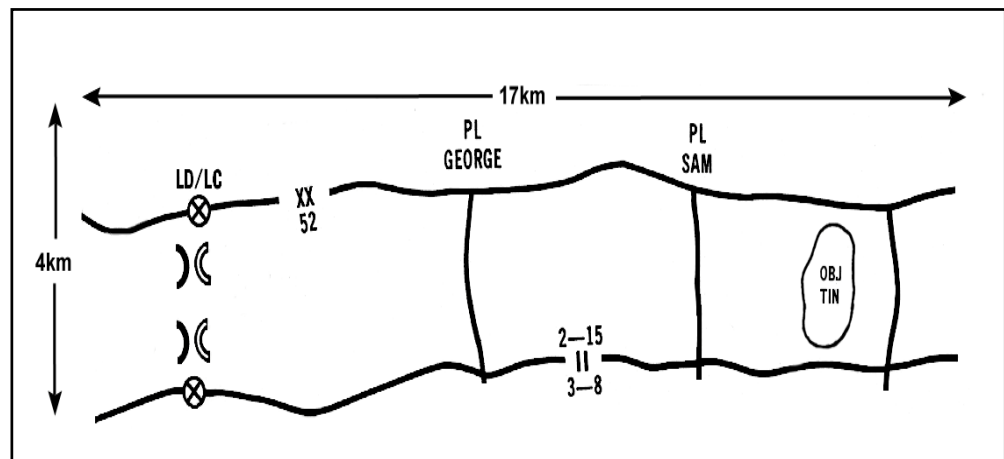


Figure C-1. Battalion task force maneuver area requirements (offense)

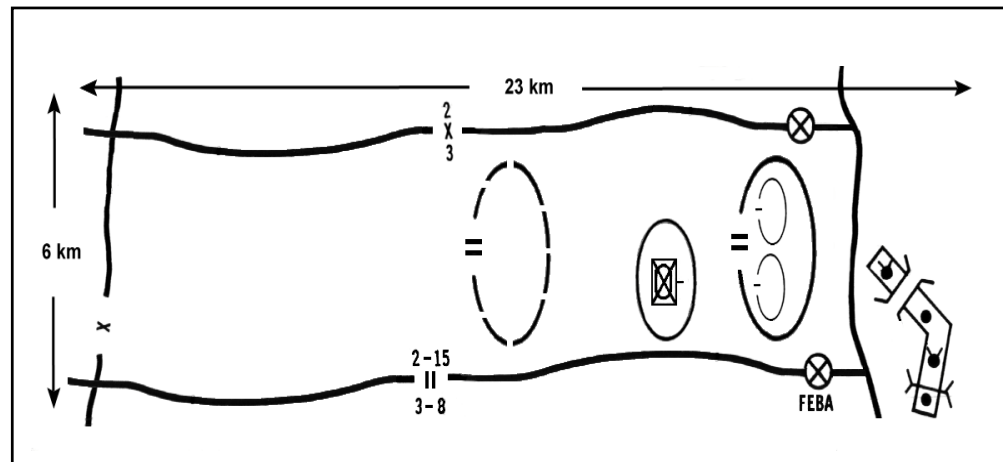


Figure C-2. Battalion task force maneuver area requirements (defense)

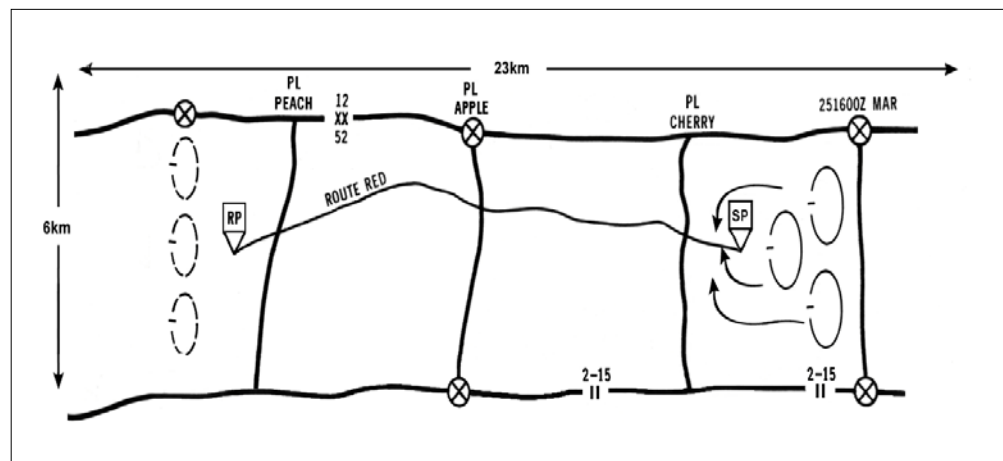


Figure C-3. Battalion task force maneuver area requirements (retrograde)

C-3. Battalion task force free-flowing exercises.

a. The battalion task force should undertake an extended FTX to provide realistic training of ARTEP missions, but not in isolation. The exercise should incorporate all critical missions in a logical sequence against a doctrinal opposing force (OPFOR). The battalion task force executes, in turn, a movement to contact, offensive operations, defensive operations, and a retrograde operation. Figure C-4 shows these ARTEP 71-2 mechanized infantry/armor battalion task force missions and the maneuver area requirements for a free-flowing FTX. The common control measures associated with these tactical operations have been omitted.

b. The maneuver area required to support the FTX shown in Figure C-4 is 86,486 acres. Compute this figure as follows:

(1) Compute the square kilometers of the two outer rectangles:

- $31 \text{ km} \times 8 \text{ km} = 248 \text{ km}^2$

- $17 \text{ km} \times 6 \text{ km} = 102 \text{ km}^2$

(2) Add those two areas: $248 \text{ km}^2 + 102 \text{ km}^2 = 350 \text{ km}^2$

(3) Convert km^2 to acres: $350 \text{ km}^2 \times 247.1 \text{ acres per square kilometer} = 86,486 \text{ acres}$

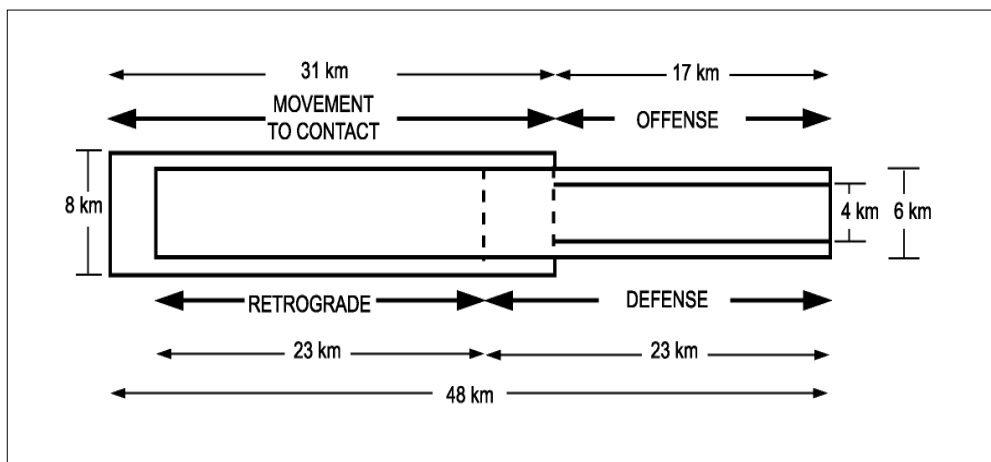


Figure C-4. Battalion task force maneuver area requirements (flowing scenario)

C-4. Brigade isolated-event exercises.

a. Using the battalion task force maneuver boxes as building blocks, trainers can construct the requirements for brigade scenarios. Figure C-5 shows the area required by the brigade to train movement to contact, offense, and defense or retrograde operations. These operations will require training as isolated events, not as a free-flowing training scenario. Figure C-5 illustrates the amount of maneuver area necessary to accommodate minimally adequate brigade-level training of these events.

b. In the case illustrated in Figure C-5, the maneuver area requirement is 496 km^2 or 122,562 acres. The brigade may practice all of its missions within this area. However, it must stop after each maneuver exercise to reposition forces for the next mission. By exercising all missions over the same terrain, training of some essential skills, such as map reading, land navigation, and reactions to tactical situations in an unfamiliar environment is not optimal. Also, repositioning of units is both a training distractor and a waste of valuable training time. The time to reposition a brigade combat team is significant.

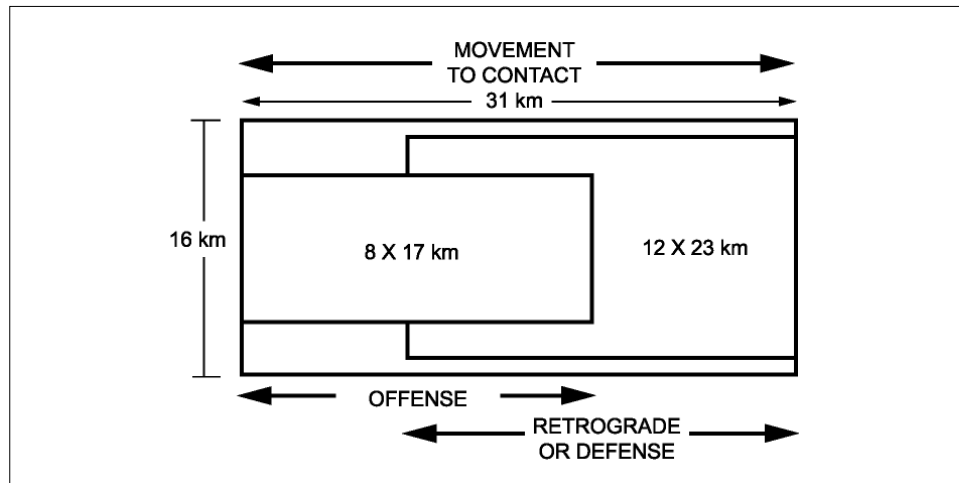


Figure C-5. Brigade maneuver area requirements (isolated events)

C-5. Brigade free-flowing exercises

a. As with the battalion task force, the brigade should conduct an extended FTX. The exercise should incorporate all critical ARTEP missions in a logical sequence against a doctrinal OPFOR. According to this process, the brigade illustrated in Figure C-6 requires 172,970 acres of training maneuver area. Compute this figure in the same manner used in paragraph C-3b of this Appendix.

(1) Compute the area of the outer rectangle:

- $31 \text{ km} \times 16 \text{ km} = 496 \text{ km}^2$
- $17 \text{ km} \times 12 \text{ km} = 204 \text{ km}^2$

(2) Add these areas $496 \text{ km}^2 + 204 \text{ km}^2 = 700 \text{ km}^2$

(3) Convert km^2 to acres: $700 \text{ km}^2 \times 247.1 \text{ acres per square kilometer} = 172,970 \text{ acres}$

b. In developing maneuver area requirements, remember that:

(1) The example in Figure C-6 is a heavy brigade composed of three infantry or armor battalions tailored to three battalion task forces. The task forces are tactically employed with two “up” and one “back” (in reserve).

(2) This brigade uses an appropriate OPFOR and a four-mission FTX of at least three days duration.

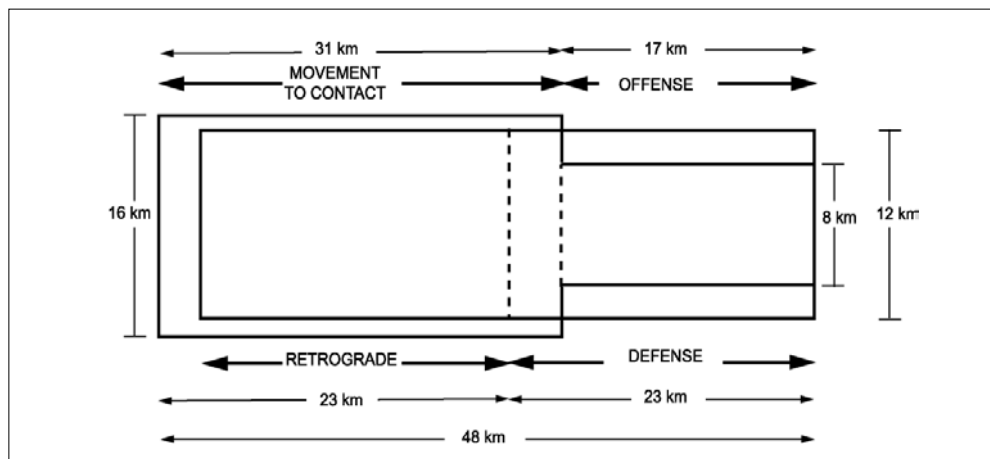


Figure C-6. Brigade maneuver area requirements (flowing scenario)

C-6. Forward support battalion exercises. The forward support battalion (FSB) establishes the brigade support area (BSA) and provides combat service support to the brigade and its units. The FSB normally accomplishes its maneuver training in conjunction with the brigade's maneuver exercises. Its maneuver area requirements are part of the brigade's and its tactical operations are closely coordinated with the brigade and its maneuver elements. Figure C-7 shows the FSB's maneuver area requirements to tactically operate the BSA when training independently. This requirement is 96 km² or 23,722 acres.

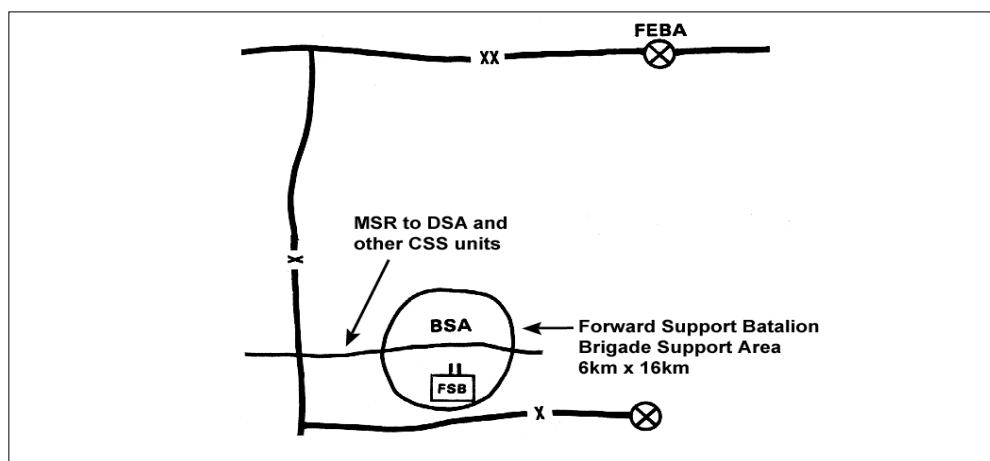


Figure C-7. FSB maneuver area requirements (training independently)

C-7. Division level exercises. Division-level maneuver training exercises are usually limited to command post exercises (CPX), fire coordination exercises (FCX), and tactical exercises without troops (TEWT). Compute annual usage requirements by using the appropriate maneuver area requirements table (See Tables A-1 through A-4, Appendix A).

C-8. ARTEP missions as separate events. Expansion of existing installations to provide larger maneuver areas is often neither practical nor feasible. Because of this, units may have to conduct ARTEP missions as separate events. Periodic access to a large maneuver area at a CTC partially offsets the disadvantages of training repeatedly over the same terrain. Lack of frequent access to a CTC forces commanders to schedule most unit training at home stations despite unavoidable limitations. The use of available maneuver area may be constrained by:

- a. Types and extent of maneuver.
- b. Number and size of subordinate organizations within maneuver forces.
- c. Surrogate or notional organizations used to provide simulations, obtain cues, or create situations to initiate activities.
- d. Limits on the duration of exercises or maneuver scenarios to conserve resources.
- e. Environmental considerations.
- f. Other land-use requirements, such as simultaneous live-fire training.
- g. Safety requirements

C-9. Potential Transformation Force Maneuver/Training Area Requirements.

a. The Initial/Interim Brigade Combat Team and ultimately the Objective Force must train to succeed across the spectrum of Army operations. That will include:

- (1) Offensive operations aimed at defeating and destroying the enemy.
- (2) Defensive operations that defeat an enemy attack, buy time, economize forces, or develop conditions favorable for offensive operations.
- (3) Stability operations that promote and protect US national interests through a combination of peacetime developmental, cooperative activities, and coercive actions in response to crisis.
- (4) Support operations that assist civil authorities in preparing for or responding to crisis and to relieve suffering.

b. IBCT and Objective Force ARTEP missions/tasks, and the required maneuver/training area requirements, were not identified and approved when this circular was published. The Army projected several IBCT maneuver/training area scenarios. These consist of contiguous and non-contiguous training lands. In the first example (Figure C-8), the requirement is 50 km x 50 km. Fort Hood fits inside this box. A second example, evolving from complex Army training exercises, is 100 km x 100 km. Rhode Island and Delaware fit inside this box. The current example, demonstrating the Transformation Force's dominance, is 150 km x 150 km. The historical Battle of the Bulge fits inside this maneuver box.

c. Ensuring the IBCT can train to standard will challenge Army commanders, trainers, and land managers to identify and sustain the required maneuver/training areas, and to develop the successful live training strategies.

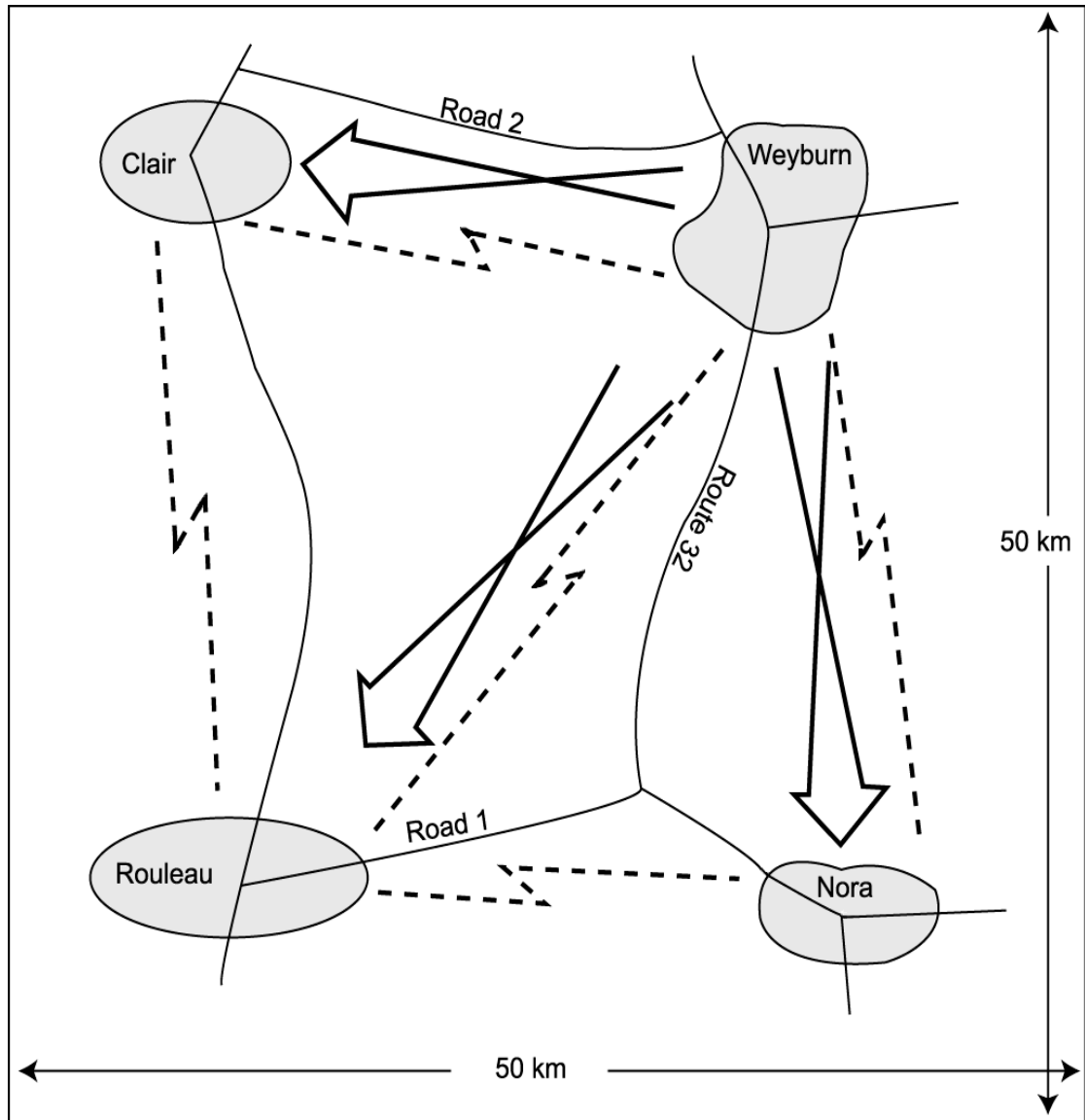


Figure C-8. IBCT maneuver area requirements (contiguous and non-contiguous)